

Los Angeles/Long Beach Y2K Business Continuity and Contingency Plan Exercise Conducted June 14-15, 1999

Executive Summary

The United States Coast Guard (USCG), Marine Safety Office/Group (MSO/GRU) Los Angeles/Long Beach exercised its Business Continuity Contingency Plan (BCCP) on June 14 and June 15, 1999. The exercise tested key operational aspects of the BCCP by simulating multiple Y2K emergency scenarios. These included disabled vessels, loss of power, radar, and communications, and an environmental threat caused by an oil spill. The exercise was supported by the participation of industry and port stakeholders.

The exercise demonstrated that vessel traffic could be adequately managed via manual plot and that back-up generators enabled VTS to recover quickly from a power loss. Alternatively, the surface area picture could be maintained using 82 foot patrol boat in the event of Vessel Traffic Service (VTS) failure. However, the exercise also suggested some areas of possible BCCP improvements. These include recommendations to acquire additional back-up power generators and communications equipment, improve manual record-keeping procedures, enhance timely and effective information flow, and heighten Y2K awareness of port infrastructure organizations.

Background

The MSO/GRU area of responsibility is the 320 miles of California coast from San Clemente in the south to the Monterey County/San Luis Obispo County line in the north, out to sea 200 nautical miles. This area includes the Ports of Los Angeles and Long Beach, the busiest port complex in the United States. The Los Angeles/Long Beach harbor is a highly commercial port, while the rest of the area contains a mix of recreational boats, fishing vessels, and marinas. The MSO/GRU is responsible for maintaining the safety of the waterways and for ensuring the protection of the marine environment from environmental casualties. The USCG has developed a strong partnership with the local maritime community and worked with port stakeholders to develop contingency plans to ensure continued operations and emergency response operations in the event of Y2K related failures. The port stakeholders have been enthusiastic and have worked cooperatively to ensure port readiness.

Step 1 – Establish Major Objectives

The major objective for the exercise was to demonstrate the effectiveness of USCG and port stakeholder contingency plans and communication processes and gather information to improve and augment those plans prior to the new millennium. Additional objectives included:

- ***Publicly Demonstrate Coast Guard, Industry, and Port Y2K Readiness*** – The exercise was designed to be closely observed by the media and the public in order to demonstrate Y2K readiness throughout the Ports of Los Angeles and Long Beach.

- ***Demonstrate Partnership with Maritime Community*** – The USCG and industry worked together to plan and conduct this exercise which served to display the positive working relationships between the USCG and the maritime community.
- ***Exercise USCG Y2K Risk Matrix*** – The Captain of the Port (COTP) will utilize a risk assessment matrix to allow vessels to enter and depart port during Y2K critical dates. The exercise was designed to determine the effectiveness of this matrix for decision support.
- ***Exercise Command Structure for Y2K*** – An incident command post will be established for each of the Y2K critical dates. The exercise was designed to evaluate and refine procedures associated with this type of crisis management command structure within the maritime environment.
- ***Exercise the IMO Circular Letter 2121 Year 2000 Code of Good Practice*** – This circular encouraged awareness of Y2K issues and compliance with USCG requests for information about vessel readiness. The exercise served to evaluate readiness of maritime ship, port, and terminal partners.

Step 2 – Identify Exercise Participants

Participants are listed in the table below.

Participant Type	Participant
Port Stakeholder	
	APL Limited
	M/V APL Singapore
	ARCO Products Company, Division of Atlantic Richfield Company
	Crowley Marine Services, Inc.
	Port of Los Angeles
	Port of Long Beach
United States Coast Guard	
	Marine Safety Office (MSO) Los Angeles/Long Beach
	Group (GRU) Los Angeles/Long Beach
	Vessel Traffic Service (VTS) Los Angeles/Long Beach
	USCG Cutter Point Camden
	USCG Headquarters

Table 1 – Los Angeles/Long Beach Exercise Participants

Step 3 – Develop Exercise Scenario(s)

The Los Angeles/Long Beach exercise consisted of three scenarios:

- ***M/V Apple Red Ship Drill*** – This scenario simulated a failure of vessel systems aboard the M/V Apple that prevents the vessel from departing port. Another vessel is waiting for the same berth. The causes the crew to contact shoreside units for assistance and coordinate a tow. This scenario was a tabletop exercise scenario since no tow was actually made.

- ***M/V APL Singapore Engine Failure*** – This scenario simulated the failure of engine control at the bridge causing the crew to run on manual engine control. While on manual, the ship clocks were rolled forward into the new year to determine whether systems would continue to function. This was a full scale exercise scenario that tested the Y2K readiness of ship systems.
- ***ARCO Oil Spill*** – This scenario simulated an oil spill at an ARCO facility. The facility discovers that phone lines are inoperative. This causes facility personnel to implement emergency procedures and contact response units by radio to initiate containment and clean up. This was a full scale exercise scenario.

Step 4 – Conduct Exercise Activities

- ***M/V Apple Red Ship Drill***
 - The M/V Apple discovered that Y2K related failures prevent the vessel from getting underway. Local failures of power and communications caused the crew to communicate with shoreside units using secondary and tertiary communications.
 - Shoreside units responded to the disabled vessel by coordinating a tow to another berth. Crowley Marine responded to the request and coordinated with the M/V Apple using backup communications.
- ***M/V APL Singapore Engine Failure***
 - The M/V APL Singapore experienced a failure of the main engine remote control system. The crew initiated emergency procedures to control the vessel and moves personnel to take control of the engine directly from the local control stand.
 - Ship clocks were then rolled forward to the new year while the engine was under manual control. Various commands to adjust engine speed were implemented. No disruption or system failure occurred.
 - Engine control was restored to the bridge and the vessel docked using bridge control.
- ***ARCO Oil Spill***
 - ARCO experienced an unintentional closure of a valve during a shipment of crude oil to Berth 121. The operator was unable to prevent the closure which resulted in a failure of a gasket and a spill of product into the water and along the dock
 - The operator shut down the pumps immediately and initiated notification procedures. A communications failure prevented the operator from contacting the ARCO OCC via telephone. A VHF radio was used to contact the OCC and to contact the USCG on Channel 16.
 - The OCC initiated notification of emergency response personnel via cellular phone.

- Response units arrived on scene and implemented contingency procedures associated with spill response.

These scenarios were implemented while the USCG had simulated failures of the San Pedro National Distress and Rescue System and power and radar failures at the Los Angeles/Long Beach VTS.

Step 5 – Conduct Post Exercise Analysis

The exercise participants and observers met immediately after the exercise to discuss each scenario. The results of the post exercise analysis are provided in the table below.

No.	Observation/Explanation	Lesson Learned	Recommended Action
1	A real-time plot of commercial vessels greater than 300Gr was maintained in the ICS Command Post. Plot showed risk assessment category (red, yellow, green) and location.	A real-time plot in the ICS Command Post was valuable in making ship movement decisions.	Units should maintain a plot of vessel status (red, yellow, green) and location during Y2K periods.
2	A status board is necessary to track vessel movement requests and determinations.	If this was a full-scale Y2K incident, there would be more vessel movements to track than during this exercise.	The ICS Command Post should utilize status boards to track vessel movement requests, vessel assignment of risk categories (r, y, g), and assignment of facility risk categories.
3	The pilots and VTS were not kept updated on the status of vessels as well as when a target has been identified.	Need to let the pilots and VTS know when a target is received and what the status of the vessel is.	Ensure that the process of categorizing and updating the status of vessels includes informing the pilots and VTS.
4	Tug and cargo movements were more difficult to track than large commercial vessels.	Notification to VTS of tug and barge movements is shorter than large commercial vessels because they do not use pilots.	Tug and barge traffic will be pre-screened prior to periods of concern.
5	The MSO/GRU had CG representatives at each pilot station during the exercise. This was done to get advance notification of ship movements.	This was valuable in allowing the CG to make vessel movement decisions.	COTPs should station a CG member at each pilot station to get advance notification of ship movements. If this is not feasible, an alternate method for getting the information should be established.
6	Communications during this exercise were good, but there is a concern of traffic congestion (both internal and external to the	Communications traffic congestion during a Y2K emergency will be very heavy and may become overwhelming.	Increase watchstanders to cover adjoining nets during a Y2K emergency. Also, an increase in the critical nature of secondary communications

No.	Observation/Explanation	Lesson Learned	Recommended Action
	CG) during a Y2K emergency, especially if messages have to be relayed.		equipment will further emphasize the need for Ready Tech Assistance from ESD San Pedro and PSI (contractors).
7	Communications failure was tested during this exercise and went successfully.	Need four generators for MSO/GRU. VTS already has a generator as a back-up to their systems.	Purchase generators for MSO/GRU to power high sites remotely in case of power failure.
8	Locally controlled radios (roof mounted) were used to communicate with High Site when phones were down.	VHF installation at San Pedro Hill/High Site worked well. Local radios work great as a back-up contingency and were easy to use.	Continue using local radios as a back-up contingency to VHF. Install VHF interface at each AOR High Site.
9	There was a lack of response/interest from some of the entities/infrastructure in the port, such as fire departments and sanitation department. After the exercise press conference, the Executive Director of Port LA was very impressed with this exercise. The Director wants the Port to sponsor a day-after Recovery/Reconstruction workshop.	Inviting all agencies, regardless of participation in the exercise, to the exercise or Hotwash promotes Y2K awareness. From a joint agency perspective, cooperation is needed by all parties during real contingencies as well as during exercises.	Continue to invite all agencies to CG exercises to ensure Y2K awareness and enthusiasm for being prepared for any contingency. Hold port-wide recovery meeting.
10	VTS operations were not adversely affected by power loss.	Recovery from the power loss at VTS was quickly and smoothly handled by the emergency generators (back-up power) due to its auto-started switching capability	Ensure other VTS units have the emergency generators for back-up power with auto-start/auto-switching capability.
11	The contingency for communications/VHF is to use hand-held radios.	VTS found that the range of hand-holds were very limited in trying to communicate with ships at sea.	Install battery back-up system in addition to emergency generator for comms equipment. Procure duplicate set of comms equipment to be hardwired to rooftop antennae to be located at chart table for ease of watchstanders to communicate with vessel traffic when manually plotting vessels.

No.	Observation/Explanation	Lesson Learned	Recommended Action
12	As a back-up contingency to VTS being down, the watchstanders were able to get an accurate surface picture by using the 82 foot WPB in this port.	Utilizing 82 foot WPB to gain surface picture is a great contingency, but 82 foot patrol boats do not have gyro stabilizing radar.	A better option may be to use a larger cutter that has gyro capability. If this is used, we recommend sending two VTS watchstanders to supplement the larger cutter: they are already trained on what needs to be tracked and know what information to gather/pass. Cutter watchstanders may not be the best fit. Another option is to use the Jacobson/Long Beach pilots to get radar picture since the range would be better.
13	During this exercise, we found that we needed an improved way of keeping records.	We found that we need a record-keeping and decision tracking system.	Recommend using a YN during the ICS stand-up/Y2K period. The YN could track and document all decisions made by the Incident Commander, there by ensuring that precautions are taken from a legal standpoint. Another YN to do the same work should be set aside for operations as well.
14	Numerous calls were coming in on the telephones and could easily overwhelm the Command Post.	A quick response and tracking mechanism needs to be implemented to ensure that no issues are left unanswered or astray.	Implement Y2K Incident sheet (similar to Bomb Threat Phone Call Sheet) so that all vital information is captured (e.g., reporting party name, nature of distress, etc.). This form should be sent to the Command Post so that it can be recorded, prioritized, and tracked.
15	Normally, a spill is reported via telephone. The contingency plan if phone is not available is to use channel 83.	Channel 83 was the designated back-up to phone on oil spill response, but SAR case occurred on Channel 83, causing delay on receiving the oil spill report and its details.	Spiller should contact MSO/GRU on Channel 16. Once comms are established, units can switch to a frequency such as 22, 81, or 70. This provides better control for the oil spill response team: comms are established and information gets passed without delay.

Table 2 – Los Angeles/Long Beach Exercise Results

For More Information***Contact the USCG Representatives***

LT Chuck Diorio
MSO Los Angeles/Long Beach
165 North Pico Avenue
Long Beach, California, USA
90802
562.980.4457
email: CDiorio@d11.uscg.mil

Or, Visit the Web Sites

Marine Safety Office: <http://www.cglalb.com/>